AMENDMENTS

Please note that the amendments are shown here in clean form for clarity. A marked up version of the amendments is attached.

IN THE SPECIFICATION:

Please replace the paragraph beginning at page 14, line 15 with the following replacement paragraph:

PCR analysis of tail DNA was performed with the upstream primer corresponding to a 16 bp sequence in the bovine a_{s1}-casein promoter region (5'-CTTGGGAGAGGAACTG-3' (SEQ ID NO: 1)) and the downstream primer corresponding to a 21 bp sequence in exon 1 (5'-AGCTACTTCCTTCTCTCCAGG-3' (SEQ ID NO: 2)) or a 21 bp sequence in exon 2 (5'-AAGACAGTTACCAAGAGCGTG-3' (SEQ ID NO: 3)) of the pIgR gene. A PCR product of 234 bp was generated after 30 cycles (1 minute 94^{0}C, 1 minute 47^{0}C, 1 minute 72^{0}C) in case of integration of the c2pIgRE2 construct. A PCR product of 244 bp was generated after 30 cycles (1 minute 94^{0}C, 1 minute 50^{0}C, 1 minute 72^{0}C) in case of integration of the c1pIgRE1 construct. The PCR was performed in 50 ml containing 1 ml of tail DNA, 1.0 unit of Goldstar Red DNA polymerase (Eurogentec), reaction buffer (75 mM Tris-HCl, pH 9.0, 20 mM (NH4)2SO4, 0.01% (w/v) TWEEN 20, 1.0 mM MgCl2 ; Eurogentec), 0.5 mM of each primer and 0.2 mM dNTP (Gibco).

Please replace the paragraph beginning at page 14, line 29 and continuing to page15, line 23 with the following replacement paragraph:

Total RNA was extracted from the mammary gland and seven other tissues (heart, spleen, liver, intestine, salivary gland, kidney and uterus) using TRIzol Reagent (Gibco BRL) (Chomczynski et al., 1987). Transgene expression was measured at 8 or 12 days during the lactation stage. Northern blot analysis was performed according to standard protocols (Sambrook et al., 1989). Briefly, the RNA preparations were separated by electrophoresis under denaturing conditions in a

0.7% agarose MOPS/formaldehyde gel and transferred from the gel to HybondTM-N+ membrane (Amersham) by downward alkaline capillary blotting for 4 hours (Chomczynski, 1992). After blotting, the membranes were pre-hybridized for 30 minutes in hybridization solution (0.125M Na2HPO4, 0.25M NaCl, 1.0mM EDTA, 7% SDS, 10% PEG 6000) with herring sperm DNA (Promega), followed by hybridization for 2 hours at 65^{0}C. The hybridization temperature for the synthetic oligonucleotide was 45^{0}C. The probes were labeled with [a-^{32}P] dCTP (3000 Ci/mmol, ICN) using the random primer DNA labeling kit (Gibco BRL). The synthetic oligonucleotide was labeled with [g-^{32}P] dATP (4500 Ci/mmol, ICN) using T4 polynucleotide kinase (Pharmacia). RNA blots were probed with an oligonucleotide (5'-ATCGATGGGTTGATGATCAAGGTGATGG-3' (SEQ ID NO: 4)) corresponding to the complementary sequence of the bovine a_{s1}-casein 5'UTR (exon 1) to determine the expression level of the transgene (probe 3, FIG. 1D). Endogenous expression of the murine pIgR gene together with the transgene expression was measured with the murine pIgR cDNA (3095 bp) (Piskurich et al., 1995). Endogenous expression of a milk protein gene was measured with a 200-bp EcoRI-PstI murine b-casein cDNA fragment (Hennighausen et al., 1982). To correct for RNA loading differences, blots were hybridized with a 1.4 kb human 28S ribosomal probe. The transcription levels of the pIgR transgene in the different mouse lines were compared with the endogenous pIgR levels by measuring the hybridization signal with a Betascope 603 Blot Analyzer (Westburg b.v., the Netherlands).

IN THE CLAIMS:

Please amend claim 1 , and cancel claims 3-14, 17-19 and 22-25 and enter new claims 26-36, as follow.

1. (Three times amended) A method for raising the concentration of a first class of immunoglobulin relative to at least a second class of immunoglobulin in a compartment of a body of a transgenic non-human farm animal or progeny thereof said method comprising:

providing a mammary gland cell of a non-human farm animal with a nucleic acid encoding a polymeric immunoglobulin receptor capable of transporting a member of said first class of immunoglobulin from the mammary gland cell's basolateral side to the mammary gland cell's apical